

Scientific Note

***TEMNOSTETHUS FASTIGIATUS* DRAKE AND HARRIS, 1926, A SPECIES OF *ELATOPHILUS* REUTER AND A SYNONYM OF *ELATOPHILUS DIMIDIATUS* (VAN DUZEE), 1921 (HEMIPTERA: HETEROPTERA: ANTHOCORIDAE)**

The Anthocoridae *Temnostethus fastigiatus* was described by Drake and Harris from the Santa Cruz Mountains; Morgan Hill; and Cayton, Shasta County, all of California (Drake, C. J. and H. M. Harris. 1926. Proc. Biol. Soc. Wash., 39: 33–46). They stated it was the first American record of the genus *Temnostethus*, known previously only from the Palearctic (Péricart, J. 1972. Faune de l'Europe et du Bassin Méditerranéen No. 7 Mason et Cie Editeurs, Paris. 402 pp.; Péricart, J. 1996. pp. 108–140. In Aukema, B. and C. Rieger (eds.). Cat. Heteroptera Palearctic Reg. Vol. 2. Cimicormorpha I. Netherlands Entomol. Soc., Amsterdam, The Netherlands.) There appears to have been no further mention of this species until the catalog of Henry (Henry, T. J. 1988. pp. 12–28. In Henry, T. J. & R. C. Froeschner (eds.). Cat. Heteroptera, Brill, Leiden.) where *T. fastigiatus* and *T. gracilis* (Horváth) were listed. We have examined the type specimens of *T. fastigiatus* in the United States National Museum, Washington, D.C., and compared them with specimens of *Elatophilus dimidiatus* (Van Duzee) from California and concluded that *T. fastigiatus* is a synonym of *E. dimidiatus*. Kelton (Kelton, L. A. 1977. Can. Entomol., 109: 243–248) reported on the occurrence of the European *Temnostethus gracillius* (Horváth) in Nova Scotia, Canada. He provided a description and illustrations of the adult, ostiolar canal, and male clasper (Kelton, L. A. 1977, 1978. Can. Dep. Agri. Pub. 1639. 101 pp.). The Canadian specimens were taken from moss-covered deciduous trees including *Acer* sp., *Quercus* sp., and *Tilia* sp., agreeing with the information given by Péricart (1972). Species of *Temnostethus* normally occur on broad-leaved trees, especially those encrusted with lichens, but Péricart (1972) stated that *T. wichmanni* Wagner occurs only on the conifer *Picea* in central Europe. In contrast, species of *Elatophilus* occur only on conifers and seem to be limited to species of the genus *Pinus* (Lattin and Stanton, 1992. J. N.Y. Entomol. Soc., 100: 424–479).

Van Duzee (Van Duzee, E. P. 1921. Proc. Calif. Acad. Sci. (4 ser.), 11: 137–144) described *Anthocoris dimidiatus* based upon the holotype, a macropterous female from Felch Ranch, near Cayton, (Shasta Co.), Calif., July 15, 1918. The two other individuals mentioned in the original description were “immature” females, one teneral with fully developed wings and the other with “elytra short, attaining middle of third tergal segment, black with the scutellar margin of clavus castaneous, base of corium and embolium and narrow membrane white.” The holotype and teneral female specimen are in the collections of the California Academy of Sciences, San Francisco, #791. The so-called immature female, actually a brachypterous individual with a narrow membrane, is now in the collection of the U.S. National Museum as part of the series of *Temnostethus fastigiatus* Drake and Harris. Kelton (Kelton, L. A. 1976. Can. Entomol., 108: 631–634) placed *Anthocoris dimidiatus* Van Duzee, 1921, into the genus *Elatophilus* Reuter,

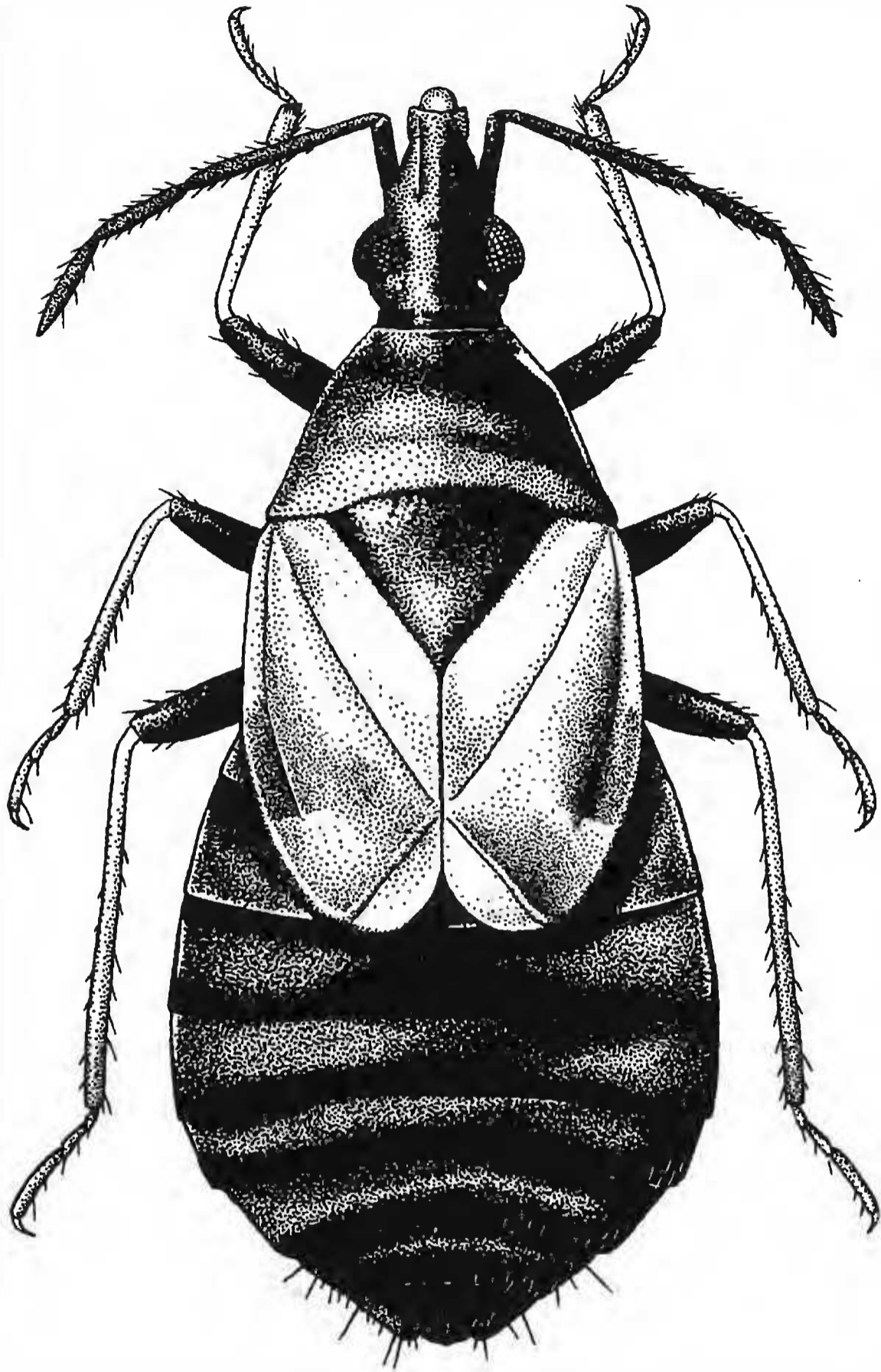


Figure 1. Adult brachypterous female of *Elatophilus dimidiatus* (Van Duzee).

a practice followed by Henry (1988). Kelton (1976) stated "Only the holotype female was available for study; in the California Academy of Sciences, San Francisco." We have examined the type specimens of *Temnostethus fastigiatus* Drake and Harris housed in the U.S. National Museum, Washington, D.C. The series included the following: Holotype (#29151 USNM) from California, Santa Cruz Mountains, brachypterous female; brachypterous female paratype with the same data; brachypterous male paratype from California, Morgan Hill, 23 May 1922, Essig (as allotype); brachypterous female paratype from California, Shasta Co.,

Cayton, 13 July 1918, E. P. Van Duzee. The brachypterous female from California, Shasta County, Cayton was part of the series of *Anthocoris dimidiatus* Van Duzee 1921 (now *Elatophilus dimidiatus*) who based his species on specimens he collected in California. The specimens of *T. fastigiatus* Drake and Harris agree with specimens of *Elatophilus dimidiatus* (Van Duzee) (NEW SYNONYMY).

Lattin and Stanton (Lattin, J. D. & N. L. Stanton. 1992. J. N.Y. Entomol. Soc., 100: 424–479) gave a review of *E. dimidiatus* that included a habitus drawing of a brachypterous female (Fig. 1) and host and distribution information. Lattin and Stanton (Lattin, J. D. & N. L. Stanton. 1993. J. N.Y. Entomol. Soc., 101: 88–94) briefly described biological information on *Elatophilus* species known to occur in North America, including *E. dimidiatus*. While some species of *Elatophilus* are known predators of the species of the scale genus *Matsucoccus* Cockerell, no specific prey information is yet known for *E. dimidiatus*.

Most of the specimens of *Elatophilus dimidiatus* collected were found on *Pinus contorta murrayana* (Grev. & Balf.) Engelm. The specimens from Morgan Hill and Santa Cruz, California lacked any host plant data, but *Pinus contorta murrayana* does not occur in that region (Forrest, G. I. 1980b. Bioch. Syst. Ecol., 8: 343–359; Forrest, G. I. 1980a. Bioch. Sys. Ecol., 8: 337–341). Digger pine (*Pinus attenuata* Lemm.) would appear to be the likely “host tree” but this remains to be determined. The specimens from Big Bear Lake, California came from the site of the champion lodgepole pine (*Pinus contorta murrayana*). According to Forrest (1980a, b), that locality is well separated from the *Pinus contorta murrayana* of the Sierra Nevada mountains and possesses the rare chemical combination characteristic of type F (α Pinene - β pinene > β phellandrene), a type not known to occur in the Sierra Nevada mountains. Further collecting, including information on the prey, may shed more light on this situation.

In summary, *Temnostethus fastigiatus* Drake and Harris, 1926, is considered a synonym of *Anthocoris dimidiatus* Van Duzee, 1921, a species now placed in the genus *Elatophilus* Reuter. The habits of *E. dimidiatus* (i.e., on *Pinus*) are in keeping with the other known species of *Elatophilus* in Europe and North America.

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